



# Chemical and Biological Forensic Analytical Center

## FEATURES:

- Gas Chromatographs, including
  - GC/DFPD/FID
  - GC/FID/TCD
  - GC/MS/MS
  - GC/MSD
  - GC/AED
  - TD/GC/DFPD
  - TD/ GC/MSD
- FTIR Spectroscopy, including
  - Microscopy
  - ATR
  - Reflectance
  - GC Tracer
  - HATR
- Mass Spectrometry, including
  - MALDI-TOF
  - ESI-LC/MS/MS
  - APCI-MS/MS
- Ion Chromatograph
- Capillary Zone Electrophoresis
- Nuclear Magnetic Resonance (NMR)
- Bio Identification, including
  - ELISA
  - Cell Culture
  - Biochemical Identification
  - PCR
- Metals Analysis
  - ICP/MS

The Forensic Analytical Center (FAC) was originally designed to support Army interests in the CWC treaty by providing chemical analysis results, advice, and assistance. Today, the laboratory is responsible for the analysis of hundreds of relatively routine samples for which results may be expected within hours or days. The FAC is also capable of conducting highly-sophisticated analysis on samples involving unusual materials in diverse mixtures and trace amounts, including chemical and biological warfare agents and mid-spectrum materials.



The lab participates in international proficiency tests, and is one of only two laboratories worldwide to have received perfect scores on all of the evaluations conducted thus far. In addition, this lab is independently accredited by international organizations to ISO 9001, the manufacturing industry standard, and the ISO Guide 25, which is specific to laboratory operations and appraises quality control, proficiency, operator adeptness, and overall laboratory performance.

A wealth of analytical equipment is housed at the laboratory. In addition, the FAC operates a self-contained mobile modular laboratory which allows for on-site analysis to be performed anywhere worldwide. The modular lab maintains the same quality assurance and quality control as the permanent lab facilities. Essential support equipment for the mobile lab includes a Gas Chromatograph/Flame Photometric/Mass Selective Detector, a chemical fume hood, electrical generators, pumps, carrier gases, and more. The modular system is adaptable and can be expanded to include other analytical systems, as on-site laboratory needs change.

The FAC would be useful to private companies, other federal, state, and local government agencies, and universities. For example, the lab can examine samples from buildings being destroyed that might contain hazardous residual materials in their fabric. The FAC can provide authoritative analytical results on hazardous materials and processes as required to meet regulatory and environmental requirements. Similarly, customers contemplating the construction of new production facilities, and needing to know the past history of a potential construction area, could

benefit from FAC assistance. The laboratory can run repetitions of experiments to look at the methods customers are contemplating using in their own testing. Finally, the FAC can build specialized equipment to perform tests on biological material, explosives, and chemicals. This equipment is designed and validated under the FAC's quality system registration to ISO 9001.



For additional information on the facility, E-mail [research.technology@sbccom.apgea.army.mil](mailto:research.technology@sbccom.apgea.army.mil).

For information on Technology Transfer applications, please contact us by E-mail ([technical.outreach@sbccom.apgea.army.mil](mailto:technical.outreach@sbccom.apgea.army.mil)) or by fax to 410-436-6529.